Radiation Newsletter

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The possibility that terrorists may try to use radioactive material's against the United States or other countries requires that public officials, emergency services, and medical facilities be prepared to identify and cope with a potentially wide range of problems, a new scientific report from the National Council on Radiation Protection and Measurements (NCRP Report No. 138) asserts.

The report suggests that a terrorist organization is more likely to release a small amount of radioactivity, possibly with an explosion, than it is to obtain and use a nuclear weapon. With the release of small amounts of radioactive material, the necessary containment and cleanup may be well within the capability of public agencies. Such an event could be "catastrophic but manageable," the report warrants.

When an explosive device is used to disperse radioactive materials, treatment of casualties is more difficult because of the contamination and the complications associated with other trauma. The debris from the event and other normally harmless materials will be contaminated. The affected area may be much larger than the immediate scene of the crime. The radiological hazard, invisible and uncertain in terms of long-term health impacts, will engender public fear and concern.

At the most basic level is the fact that one of the terrorist's chief aims is to cause psychological effects; to induce fear in a population. Such fear is further compounded when radiation or radioactivity are involved. People can neither see nor sense the presence of radiation, but they know that it is potentially hazardous.

The report places emphasis on the need for public authorities and for scientists to be attentive to the psychosocial effects of terrorism involving the dispersal of radioactive material.

NCRP recommends that emergency teams and vehicles be equipped with radiation monitors which would allow detection of radiation at an explosion scene. Levels of radiation so detected would govern how public agencies respond.

The first responders should be trained in coping with radiation and training should be extended to emergency physicians and other hospital personnel, to primary care physicians, to mental health experts, social service and disaster relief agencies, to civil affairs personnel and to local government officials.

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ADVISORY COMMISSION ON RADIOACTIVE WASTE & DECOMMISSIONING NEWS

Department of Human Services
MAINE RADIATION
CONTROL PROGRAM

INSIDE THIS ISSUE:

Special points of interest:

- Low Level Radioactive Waste and Materials in Maine
- Decommissioning of Maine Yankee Atomic Power Plant
- Radioactive Waste Management
- High Level Radioactive Waste

NEXT MEETING OF THE ACORWD is set for the Jan/Feb 2002 timeframe. Please check the website or call for details.

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Maine Yankee Security

The Advisory Commission on Radioactive Waste and Decommissioning (ACORWD) held a meeting on 13 November 2001 to hear issues concerning security and fuel storage at Maine Yankee. Terrorist activities in the Unites States have prompted many state government and citizen groups to question security at the decommissioning power plant. The issues of concern were the long term or short term storage of fuel, emergency procedures and evacuation, state jurisdiction and public concerns. Currently the plant is over 50% decommissioned and spent fuel will be transferred to the onsite storage facility soon.

The commission heard from the State's Nuclear Safety Advisory – Paula Craighead, Maine National Guard Adjutant General – Major General Tinkham and the Public Utilities Commission Engineer – Joe Sukaskas. They were followed by Maine Yankee's Mike Meisner, Dennis Harnish from the AG's Office and representatives of citizens groups.

Paula Craighead began by defining the role of the safety advisor and the current situation of the decommissioning. She made it clear that the plant has no operating reactor and is well on its way to decommissioning and that security was at a level allowed by the NRC for a plant of its status. The federal government needs to find a central home for all spent fuel for the King administration has never been satisfied with the storage of spent fuel in Maine.

General Tinkham outlined the state's involvement with Maine Yankee and its confidence in Maine Yankee's security. The general and the governor have met many times with Maine Yankee to receive briefings on their security. They came from those meetings finding the plant very secure and that it did not need a National Guard presences. Response plans between Maine Yankee, National Guard and State Police will make it more secure. The plant is secure from ground and sea threats, however the air is beyond control. General Tinkham also felt air is also a very unlikely scenario at the site.

Joe Sukaskas stated the Public Utilities Commission no longer regulates the former plant. It is involved when the utilities wants to recover costs of decommissioning and with the DOE's Nuclear Waste Fund. It has urged the federal government to speed up the removal of spent fuel.

Dennis Harnish stated that the state has no role to play in determining dry vs. wet storage and cask design, nor does the state have authority in the movement of spent fuel.

Mike Miesner reiterated that certain items of information on security cannot be discussed in public.

A number of members of the citizen group, David Lochbaum and Peter Christine, presented their concerns for "Force on Force" tests and the need for the National Guard at the decommissioning plant

The commission has not made a determination on the safety issues, it does feel a safety analyses needs to be done on wet vs. dry. It believes the spent fuel will be on site for some time in the storage facility and will further pursue the issues of force on force tests and spent fuel removal from the site.

All meetings of the Advisory Commission are open to the public. The commission meets 4-6 times a year to discuss LLW and decommissioning issues. Meeting dates can be found at our website or call Tom Hillman at 207-287-8401 for the next meeting time or to be placed on the meeting notification list.

LowTrack to be Continued via Private Sector

An exclusive license to operate the LowTrack software was recently obtained from the Idaho National Engineering and Environmental Laboratory (INEEL) by Ron Fuchs, a former INEEL Senior Program/ Project Engineer. Funding for LowTrack a waste inventory management system originally developed with funding from the U. S. Department of Energy was discontinued by DOE at the end of September 2000. Fuchs plans to distribute and manage operation of the LowTrack software through ML Technologies, Inc., a software development firm based in Idaho that specializes in database design, IT services, and web development.

LowTrack has been used by waste generators, brokers and processors, hospitals, and educational facilities. According to ML Technologies, the software offers simplified inventory management, uniform manifest generation, two-dimensional bar coding, automatic unit-of-measure conversions, and waste classification validation in accordance with 10 CFR 61. ML Technologies claims that the software provides cost savings and is able to interface with existing systems without compromising original data.

In order to use the LowTrack software, interested parties must now purchase a membership in the LowTrack Users Group. Membership prices vary from $800 - $1,200 per year, depending on the type of user (i.e., hospital, educational institution, generator, etc.) Members receive the following benefits:

- one new copy of the 32-bit version of LowTrack (when available),
- 12 months of LowTrack technical support made available exclusively through ML Technologies,
- the LowTrack professional newsletter,
- communication with waste management professionals from hundreds of companies and organizations around the nation, and
- an exchange of information about new regulations, automation of reporting, and simplification of work processes.

For additional information or to become a member of the LowTrack Users Group, please contact Ron Fuchs of ML Technologies, Inc. at (208) 522-8784.

MAINE YANKEE.

The Nuclear Regulatory Commission (NRC) seeks public comments on the August 13 Revision 2 to the License Termination Plan (LTP) for Maine Yankee nuclear power plant, Lincoln County, Maine (Docket No. 50-309).

The revised LTP is available electronically on NRC's ADAMS public document system, which can be accessed through NRC's Web site http://www.nrc.gov. It is also available on the Maine Yankee Atomic Power Station Web site at: http://ww.maineyankee.com

Massachusetts Low-Level Radioactive Waste Board to Fold Next Summer

Massachusetts' Low-Level Radioactive Waste Board will be history by June 30 2002. Three of the board's four members met Wednesday, and agreed to the phase-out schedule. It was the first meeting in more than a year of the board, which met twice in 2000.

The agency was established by the state Legislature in 1987 to site a possible disposal facility for low-level radioactive waste, but the state abandoned those plans in 1995.

The board's primary function since has been one of keeping records of waste disposed in Utah and South Carolina by about 460 Massachusetts businesses, hospitals and research facilities. The survey and record-keeping duties most likely will be transferred to the state department of public health.

The board is headed by former state Sen. T. Norton of Fall river and staffed by two employees and one part-timer.

Lost and Stolen Nuclear Materials in the United States

Three Mile Island Alert, Inc. has a website that informs the public on the past history of radiation sources that are lost, stolen or illegally discarded. Some of these are lost by overnight couriers. Nuclear contamination of packages, workers and delivery vehicles have occurred. Recently, a Federal Express jet was grounded until a radiation survey could determine if it was contaminated by a faulty shipment of radioactive material which had already irradiated other equipment, a vehicle and a person. A popular radioactive industrial gauge is stolen at the rate of once a month. When these are reported stolen, press releases are issued to warn the public of the danger.

Radioactive Lighting for Sale

In a Nuclear Regulatory Commission (NRC) Daily Event Report on 2/18/97 the North Carolina division of radiation control was notified by the nuclear regulatory commission that a store in Fayetteville, North Carolina was selling tritium lighting devices.

Further investigation by the NC division of radiation control disclosed that an army surplus store was selling tritium lighting devices (torches, personnel illuminators, and map readers) to military personnel as instructed wrongfully by another company which has an NRC license.

On 1/05/89, that company distributed 30 devices (40 sources) and on 05/07/91 they distributed another 24 devices (24 sources). The two shipments totaled 64 sources of tritium measuring 136.9 curies. The store had only 22 sources remaining in stock (46.65 curies of tritium) and they have been shipped back to the licensee. The other 42 sources (90.35 curies) were sold without any records being made of the sale. The state has not yet determined what type of action it will take.

Failure to Regulate

The Nuclear Regulatory Commission in late 1996 decided to address lost sources even though they have discussed it internally since 1984 and have known about the problem in the mid 1950's as the Atomic Energy Commission (AEC). The AEC created a general licensing system in 1959. General licensee are not subject to audits, inspections or even inventorying their radioactive sources with a state or federal agency such as the NRC. This system was intentionally designed to avoid the cost and man-hours by the Atomic Energy Commission for keeping track of all of these sources. There may now be up to 9000 orphaned licensed nuclear devices in the United States.

The Incentive to "Dump" is Too Great

Far too often licensed sources (i.e. gauges, glow in the dark exit signs, special cameras) are illegally dumped to avoid paying the disposal expenses. Because the fine for illegal dumping is only $2000 and proper disposal can cost up to $20,000, the incentive is to simply "dump." If a radioactive source ends up smelted at a steel mill, the cost of cleanup cost can soar to as much as $100 million.

Steel mills and scrap yards are not required to monitor for radioactive materials.

On August 14, 1997, (62 FR 43556) NRC announced its intentions to conduct a survey of the steel industry for obtaining data tailored to a risk analysis. The survey would have provided empirical data about discoveries of radioactive material in the recycling stream. A risk analysis would use this information as the basis to systematically evaluate the effectiveness of current regulation and possible regulatory changes. The analysis supports regulatory changes toward improving the control of radioactive devices commonly used in many industries.

The NRC received three letters from trade associations and a steel mill. All of these letters indicated that their organizations would not support the survey. Because participation in the survey would be voluntary and the letters were negative, the response rate for the survey would likely be low , resulting in insufficient data for a risk analysis as originally planned.

Official State of Maine Response

The United State Nuclear Regulatory Commission (USNRC) on December 18, 2000 published in the Federal Register (65 FR 79162), the "Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material" regulations (effective date February 16, 2001). This amendment included explicit provisions for a registration process under the existing regulations. Although the amendments apply to all users of these devices (i.e. general licensees), the registration and any associated fee apply to a limited fraction of these general licensees. The amended rule applies mostly to fixed and portable gauging devices, but excludes items such as tritium exit signs, static eliminators, and gas chromatographs. The final rule is intended to allow the US NRC to better track certain general licensees and the devices they possess, and to better ensure that general licensees are aware of and understand the requirements for the possession of devices containing byproduct material.

In Maine, since there has been an on going effort to track and register ALL generally licensed devices in the State of Maine. This has also been the case in a few other Agreement States. This includes accelerator produced and naturally occurring materials as well. For fixed and portable gauging devices there is a fee associated with the registration and for all other types (i.e. tritium exit signs, static eliminators, and gas chromatographs) there is no fee. For further information regarding the general license program in Maine or within the NRC, please do not hesitate to contact the Radiation Control Program at 287-5676 or Shawn Seeley, Jay Hyland or Wayne Malloch at the telephone numbers on page 1.